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L2   ANSWER 1 OF 20  USPATFULL on STN
AN     2004:24734  USPATFULL
TI     Production of functional antibodies in filamentous fungi
IN     Power, Scott D., San Bruno, CA, UNITED STATES
```

Wang, Huaming, Fremont, CA, UNITED STATES
Ward, Michael, San Francisco, CA, UNITED STATES
PI US 2004018573 A1 20040129
AI US 2003-418836 A1 20030417 (10)
PRAI US 2002-373889P 20020418 (60)
US 2002-411540P 20020918 (60)
US 2002-411537P 20020918 (60)
US 2003-452134P 20030304 (60)
DT Utility
FS APPLICATION
LREP VICTORIA L. BOYD, GENENCOR INTERNATIONAL, INC., 925 PAGE MILL ROAD, PALO ALTO, CA, 94304-1013
CLMN Number of Claims: 47
ECL Exemplary Claim: 1
DRWN 16 Drawing Page(s)
LN.CNT 2677
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Described herein are methods for the production of monoclonal antibodies in filamentous fungi host cells. The monoclonal antibodies are expressed as full-length fusion proteins that retain functional antigen binding and antibody-dependent cellular cytotoxicity capabilities. Improvements in the cleavage of the glucoamylase-light chain fusion protein to yield a mature antibody are also provided. The antibodies produced in filamentous fungi show equivalent pharmacokinetic disposition to antibodies produced in mammalian cells.

L2 ANSWER 2 OF 20 USPATFULL on STN
AN 2004:53316 USPATFULL
TI Heat tolerant phytases
IN van Loon, Adolphus, Rheinfelden, SWITZERLAND
Mitchell, David, Aesch, SWITZERLAND
PA Roche Vitamins Inc., Parsippany, NJ, United States (U.S. corporation)
PI US 6699704 B1 20040302
AI US 2000-635504 20000809 (9)
RLI Continuation of Ser. No. US 1997-868435, filed on 3 Jun 1997, now patented, Pat. No. US 6291221 Division of Ser. No. US 1996-744231, filed on 5 Nov 1996, now patented, Pat. No. US 6358722 Continuation-in-part of Ser. No. US 1995-424757, filed on 18 Apr 1995, now abandoned
PRAI EP 1994-810228 19940425
DT Utility
FS GRANTED
EXNAM Primary Examiner: Prouty, Rebecca E.; Assistant Examiner: Ramirez, Delia
LREP Bryan Cave LLP
CLMN Number of Claims: 24
ECL Exemplary Claim: 1
DRWN 23 Drawing Figure(s); 32 Drawing Page(s)
LN.CNT 3112
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to heat tolerant phytases and DNA sequences which code therefor. The phytases are useful in hydrolyzing phytate to inositol and inorganic phosphates. The phytases are valuable feed additives.

L2 ANSWER 3 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:678997 CAPLUS
DN 139:192491
TI Methods for optimized codon usage for plant polypeptide synthesis in filamentous fungi
IN Taira, Rikako; Tsutsumi, Noriko; Terui, Yuri; Takagi, Shinobu
PA Novozymes A/S, Den.
SO PCT Int. Appl., 46 pp.
CODEN: PIXXD2
DT Patent

LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003070957	A2	20030828	WO 2003-DK108	20030219
	WO 2003070957	A3	20031224		

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PRAI	DK 2002-263	A	20020220
	DK 2002-871	A	20020607

AB The present invention provides altered codon usage in genes encoding plant polypeptides for increased heterologous expression and production of plant polypeptides of interest in filamentous fungi host cells. This invention evaluates the frequency of and impact of codon mutations upon heterologous expression of plant polypeptide genes. Mutagenesis of plant DNA sequences, creation of vector constructs, and genetic transfer of these mutant constructs to fungal hosts are provided.

L2 ANSWER 4 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:611731 CAPLUS
DN 137:168388
TI Genetic engineering of Aspergillus awamori for production of bovine chymosin (rennin)
IN Elena Cardoza, Rosa; Gutierrez Martin, Santiago; Moralejo Lorenzo, Francisco J.; Casqueiro Blanco, Francisco Javier; Martin Martin, Juan Francisco
PA Laboratorios Ovejero S.A., Spain
SO Eur. Pat. Appl., 21 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1231272	A2	20020814	EP 2002-380019	20020130
	EP 1231272	A3	20021113		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRAI	ES 2001-286	A	20010208

AB A procedure for obtaining curd (bovine rennin) by the expression, not of the sequencing of its natural gene, but of an artificial gene, synthetic and optimized following certain rules of use of triplets in DNA, is described. Preferably, this expression is made with filamentous fungi, especially with GRAS status, and particularly Aspergillus niger, awamori variant. The synthesis of optimized genes for filamentous fungi, carried out here for the first time for chymosin, allows us to obtain high levels of expression, which means that the procedure is useful for the industrial production of this valuable protein. Chymosin is obtained extra-cellularly, using a plasmid with a fungal secretion signal, thus allowing for its purification by the supernatants from the growth of this fungus, for use in the food industry.

L2 ANSWER 5 OF 20 USPATFULL on STN
AN 2002:332862 USPATFULL

TI Modification of fatty acid composition in plants by expression of a fungal acyl-CoA desaturase
IN Folkerts, Otto, Guilford, CT, United States
Merlo, Donald J., Carmel, IN, United States
PA Dow AgroSciences LLC, Indianapolis, IN, United States (U.S. corporation)
PI US 6495738 B1 20021217
AI US 1999-280428 19990329 (9)
PRAI US 1998-79840P 19980330 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: McElwain, Elizabeth
LREP Stuart, Donald R., Ludwig, Kenneth B.
CLMN Number of Claims: 13
ECL Exemplary Claim: 13
DRWN 0 Drawing Figure(s); 0 Drawing Page(s)
LN.CNT 2277
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Genes-encoding a delta-9 CoA desaturase from Aspergillus nidulans have been isolated. The proteins encoded by genes, when expressed in a plant, can alter the saturate levels of the oil.

L2 ANSWER 6 OF 20 USPATFULL on STN
AN 2002:57582 USPATFULL
TI Heat tolerant phytases
IN van Loon, Adolphus, Rheinfelden, SWITZERLAND
Mitchell, David, Aesch, SWITZERLAND
PA Roche Vitamins, Inc., Parsipanny, NJ, United States (U.S. corporation)
PI US 6358722 B1 20020319
AI US 1996-744231 19961105 (8)
RLI Continuation-in-part of Ser. No. US 1995-424757, filed on 18 Apr 1995, now abandoned
PRAI EP 1994-810228 19940425
DT Utility
FS GRANTED
EXNAM Primary Examiner: Achutamurthy, Ponnathapu; Assistant Examiner: Tung, Peter P.
LREP Bryan Cave, LLP
CLMN Number of Claims: 4
ECL Exemplary Claim: 1
DRWN 41 Drawing Figure(s); 32 Drawing Page(s)
LN.CNT 2963
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to heat tolerant phytases and DNA sequences which code therefor. The phytases are useful in hydrolyzing phytate to inositol and inorganic phosphates. The phytases are valuable feed additives.

L2 ANSWER 7 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:676897 CAPLUS
DN 135:237585
TI Codon usage in methylotrophic yeasts and its use in increasing yields of foreign proteins in yeast expression hosts
IN Takagi, Shinobu; Terui, Yuji; Tsutsumi, Noriko; Taira, Rikako
PA Novozymes A/S, Den.
SO PCT Int. Appl., 61 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001066693	A1	20010913	WO 2001-DK154	20010309

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,

CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU,
ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 2003022280 A1 20030130 US 2001-803454 20010309
PRAI DK 2000-392 A 20000310
DK 2000-419 A 20000315
US 2000-190441P P 20000317

AB The present invention relates to a method of manufacturing foreign protein in the methylotrophic yeast Pichia in which the yield of the protein is increased by altering the codon usage of the gene to reflect the usage in strongly expressed genes of Pichia methanolica. Expression of the native gene for the xylanase of Thermomyces lanuginosus in Pichia methanolica gave a yield of 12 mg enzyme/L. Parallel incubations using the codon optimized gene resulted in a yield of 20 mg enzyme/L. Expression was from the MeOH-inducible promoter of the AUG1 gene. For the phytase gene of Aspergillus fumigatus the difference was 1 mg enzyme/L for the native gene and 20 mg enzyme/L for the codon optimized gene.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 8 OF 20 USPATFULL on STN
AN 2001:179330 USPATFULL
TI Gene encoding oxalate decarboxylase from aspergillus phoenices
IN Scelonge, Christopher J., Des Moines, IA, United States
Bidney, Dennis L., Urbandale, IA, United States
PA Pioneer Hi-Bred International, Inc., Des Moines, CA, United States (U.S. corporation)
PI US 6303846 B1 20011016
AI US 1999-290202 19990412 (9)
RLI Division of Ser. No. US 1997-821827, filed on 21 Mar 1997
DT Utility
FS GRANTED
EXNAM Primary Examiner: Fox, David T.; Assistant Examiner: Kubelik, Anne
LREP Pioneer Hi-Bred International, Inc.
CLMN Number of Claims: 5
ECL Exemplary Claim: 1
DRWN 5 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 1363
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A novel nucleic acid sequence encoding Aspergillus phoenices oxalate decarboxylase (APOXD) has been determined, as well as the encoded amino acid sequence. The gene and its encoded protein are useful in degrading oxalate, in diagnostic assays of oxalate, and as a selectable marker.

L2 ANSWER 9 OF 20 USPATFULL on STN
AN 2001:168304 USPATFULL
TI Gene encoding oxalate decarboxylase from aspergillus phoenices
IN Scelonge, Christopher J., DesMoines, IA, United States
Bidney, Dennis L., Urbandale, IA, United States
PA Pioneer Hi-Bred International, Inc., Des Moines, IA, United States (U.S. corporation)
PI US 6297425 B1 20011002
AI US 1997-821827 19970321 (8)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Hutzell, Paula K.; Assistant Examiner: Zaghmout, Ousama M-Faiz
LREP Pioneer Hi-Bred International, Inc.

CLMN Number of Claims: 29
ECL Exemplary Claim: 1
DRWN 5 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 1388
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A novel nucleic acid sequence encoding Aspergillus phoenices oxalate decarboxylase (APOXD) has been determined, as well as the encoded amino acid sequence. The gene and its encoded protein are useful in degrading oxalate, in diagnostic assays of oxalate, and as a selectable marker.

L2 ANSWER 10 OF 20 USPATFULL on STN
AN 2001:158053 USPATFULL
TI Heat tolerant phytases
IN van Loon, Adolphus, Rheinfelden, Switzerland
Mitchell, David, Aesch, Switzerland
PA Roche Vitamins Inc., Nutley, NJ, United States (U.S. corporation)
PI US 6291221 B1 20010918
AI US 1997-868435 19970603 (8)
RLI Division of Ser. No. US 1996-744231, filed on 5 Nov 1996
Continuation-in-part of Ser. No. US 1995-424757, filed on 18 Apr 1995, now abandoned
PRAI EP 1994-810228 19940425
DT Utility
FS GRANTED
EXNAM Primary Examiner: Achutamurthy, Ponnathapu; Assistant Examiner: Tung, Peter P.
LREP Waddell, Mark E., Haracz, Stephen M.Bryan Cave LLP
CLMN Number of Claims: 21
ECL Exemplary Claim: 1,10
DRWN 41 Drawing Figure(s); 32 Drawing Page(s)
LN.CNT 1815
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to heat tolerant phytases and DNA sequences which code therefor. The phytases are useful in hydrolyzing phytate to inositol and inorganic phosphates. The phytases are valuable feed additives.

L2 ANSWER 11 OF 20 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN
AN 2001:29354 AGRICOLA
DN IND22301454
TI Overexpression and lack of degradation of thaumatin in an aspergillopepsin A-defective mutant of Aspergillus awamori containing an insertion in the pepA gene.
AU Moralejo, F.J.; Cardoza, R.E.; Gutierrez, S.; Sisniega, H.; Faus, I.; Martin, J.F.
AV DNAL (QR1.E9)
SO Applied microbiology and biotechnology, Dec 2000. Vol. 54, No. 6. p. 773-777
Publisher: Berlin, Germany : Springer Verlag.
CODEN: AMBIDG; ISSN: 0175-7598
NTE Includes references
CY Germany
DT Article
FS Non-U.S. Imprint other than FAO
LA English
AB A gene encoding the sweet-tasting protein thaumatin (tha) with optimized **codon usage** was expressed in **Aspergillus** awamori. Mutants of A. awamori with reduced proteolytic activity were isolated. One of these mutants, named lpr66, contained an insertion of about 200 bp in the pepA gene, resulting in an inactive aspergillopepsin

A. In vitro thaumatin degradation tests confirmed that culture broths of mutant lpr66 showed only a small thaumatin-degrading activity. A. awamori lpr66 has been used as host strain for thaumatin expression cassettes containing the tha gene under the control of either the cahB (cephalosporin acetylhydrolase) promoter of Acremonium chrysogenum or the gdhA (glutamate dehydrogenase) promoter of Aspergillus awamori. Residual proteolytic activities were repressed by using a mixture of glucose and sucrose as carbon sources and L-asparagine as nitrogen source. Degradation of thaumatin by acidic proteases was prevented by maintaining the pH value at 6.2 in the fermentor. Expression of cassettes containing the gdhA promoter was optimal in ammonium sulfate as nitrogen source, whereas transformants expressing the tha gene from the cahB promoter yielded higher thaumatin levels using L-asparagine as nitrogen source. Under optimal fermentation conditions, yields of 105 mg thaumatin/l were obtained, thus making this fermentation a process of industrial interest.

L2 ANSWER 12 OF 20 COPYRIGHT 2004 CSA on STN DUPLICATE 1
AN 2004404214 BIOENG
DN 4813846
TI Overexpression and lack of degradation of thaumatin in an aspergillopepsin A-defective mutant of Aspergillus awamori containing an insertion in the pep A gene
AU Moralejo, FJ; Cardoza, RE; Gutierrez, S; Sisniega, H; Faus, I; Martin, JF
CS Institute of Biotechnology INBIOTEC, Science Park of Leon, Avda del Real 1, 24006 Leon, Spain, [mailto:degjmm@unileon.es]
SO Applied Microbiology and Biotechnology [Appl. Microbiol. Biotechnol.]. Vol. 54, no. 6, pp. 772-777. 13 Dec 2000.
Published by: Springer-Verlag
ISSN: 0175-7598
DT Journal
LA English
SL English
OS Microbiology Abstracts C: Algology, Mycology & Protozoology; Agricultural and Environmental Biotechnology Abstracts
AB A gene encoding the sweet-tasting protein thaumatin (tha) with optimized **codon usage** was expressed in **Aspergillus** awamori. Mutants of A. awamori with reduced proteolytic activity were isolated. One of these mutants, named lpr66, contained an insertion of about 200 bp in the pepA gene, resulting in an inactive aspergillopepsin A. In vitro thaumatin degradation tests confirmed that culture broths of mutant lpr66 showed only a small thaumatin-degrading activity. A. awamori lpr66 has been used as host strain for thaumatin expression cassettes containing the tha gene under the control of either the cahB (cephalosporin acetylhydrolase) promoter of Acremonium chrysogenum or the gdhA (glutamate dehydrogenase) promoter of Aspergillus awamori. Residual proteolytic activities were repressed by using a mixture of glucose and sucrose as carbon sources and l-asparagine as nitrogen source. Degradation of thaumatin by acidic proteases was prevented by maintaining the pH value at 6.2 in the fermentor. Expression of cassettes containing the gdhA promoter was optimal in ammonium sulfate as nitrogen source, whereas transformants expressing the tha gene from the cahB promoter yielded higher thaumatin levels using l-asparagine as nitrogen source. Under optimal fermentation conditions, yields of 105 mg thaumatin/l were obtained, thus making this fermentation a process of industrial interest.

L2 ANSWER 13 OF 20 USPATFULL on STN
AN 1999:106336 USPATFULL
TI Recombinant fructosyl amino acid oxidase
IN Kato, Nobuo, Kameoka, Japan
Sakai, Yasuyoshi, Otsu, Japan
Tani, Yoshiki, Kyoto, Japan
Fukuya, Hiroshi, Kyoto, Japan
PA Kyoto Daiichi Kagaku Co., Ltd., Kyoto-fu, Japan (non-U.S. corporation)

PI US 5948659 19990907
AI US 1998-31059 19980226 (9)
RLI Division of Ser. No. US 1997-899172, filed on 23 Jul 1997
PRAI JP 1996-193344 19960723
DT Utility
FS Granted
EXNAM Primary Examiner: Wax, Robert A.; Assistant Examiner: Nashed, Nashaat T.
LREP Birch, Stewart, Kolasch & Birch, LLP
CLMN Number of Claims: 5
ECL Exemplary Claim: 1
DRWN 14 Drawing Figure(s); 10 Drawing Page(s)
LN.CNT 1430
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides a recombinant protein which shows fructosyl amino acid oxidase activity, a DNA encoding the same, an expression vector containing the DNA, a transformant transformed by the expression vector, and the method of preparing recombinant fructosyl amino acid oxidase by culturing the resultant transformant, and the recombinant fructosyl amino acid oxidase thus obtained.

L2 ANSWER 14 OF 20 USPATFULL on STN
AN 1998:138727 USPATFULL
TI Recombinant cells that express phytate degrading enzymes in desired ratios
IN Nevalainen, Helena K. M., North Epping, Australia
Paloheimo, Marja T., Helsinki, Finland
Fagerstrom, Richard B., Espoo, Finland
Miettinen-Oinonen, Arja S. K., Masala, Finland
Turunen, Marja K., Helsinki, Finland
Rambosek, John A., Seattle, WA, United States
Piddington, Christopher S., Seattle, WA, United States
Houston, Christine S., Bothell, WA, United States
Cantrell, Michael A., Moscow, ID, United States
PA Rohm Enzyme Finland Oy, Rajamaki, Finland (non-U.S. corporation)
PI US 5834286 19981110
WO 9403072 19940217
AI US 1995-374652 19950524 (8)
WO 1993-US7058 19930727
19950524 PCT 371 date
19950524 PCT 102(e) date
RLI Continuation-in-part of Ser. No. US 1992-925401, filed on 31 Jul 1992, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Grimes, Eric
LREP Sterne, Kessler, Goldstein & Fox P.L.L.C.
CLMN Number of Claims: 38
ECL Exemplary Claim: 1
DRWN 34 Drawing Figure(s); 31 Drawing Page(s)
LN.CNT 4113
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides a recombinant combination strain which is capable of over-expressing at least two different genes under two separate promoters in filamentous fungi. The genes encode phytase and pH 2.5 acid phosphatase. Mixtures containing desired ratios of the two enzymes are prepared by recombinant DNA techniques. The enzyme mixtures show a cooperative effect in the degradation of phytic acid and its salts. The preferred ratios of the two enzymes are from about 3:1 to about 16:1.

L2 ANSWER 15 OF 20 USPATFULL on STN
AN 1998:72405 USPATFULL
TI Modification of cryptic splice sites in heterologous genes expressed in

fungi
IN Thompson, Sheryl, Davis, CA, United States
PA Novo Nordisk Biotech, Inc., Davis, CA, United States (U.S. corporation)
PI US 5770371 19980623
AI US 1996-672158 19960627 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Guzo, David; Assistant Examiner: Sandals, William
LREP Zelson, Esq., Steve T., Agris, Esq., Cheryl H.
CLMN Number of Claims: 25
ECL Exemplary Claim: 1
DRWN 8 Drawing Figure(s); 11 Drawing Page(s)
LN.CNT 1321
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to methods for obtaining a fungal host cell comprising a nucleic acid sequence encoding a heterologous polypeptide, wherein at least one cryptic splice site is modified in the nucleic acid sequence. The present invention also relates to a nucleic acid sequence(s) with a modified cryptic splice site(s) as well as nucleic acid constructs, vectors, and host cells comprising said nucleic acid sequence(s). The present invention further relates to methods for recombinant production of a polypeptide encoded by said nucleic acid sequence.

L2 ANSWER 16 OF 20 USPATFULL on STN
AN 97:81137 USPATFULL
TI Recombinant production of glucoamylase P in trichoderma
IN Torkkeli, Tuula, Helsinki, Finland
Joutsjoki, Vesa, Helsinki, Finland
Torkkeli, Helena, Helsinki, Finland
Vainio, Arja, Helsinki, Finland
Fagerstrom, Richard, Espoo, Finland
Aho, Sirpa, Helsinki, Finland
Korhola, Matti, Helsinki, Finland
Nevalainen, Helena, North Epping, Australia
PA Alko-Yhiot Oy, Finland (non-U.S. corporation)
PI US 5665585 19970909
AI US 1995-385370 19950207 (8)
RLI Continuation of Ser. No. US 1993-104853, filed on 12 Aug 1993, now abandoned And a continuation-in-part of Ser. No. US 1992-937789, filed on 3 Sep 1992, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: LeGuyader, John L.
LREP Sterne, Kessler, Goldstein & Fox p.l.l.c.
CLMN Number of Claims: 35
ECL Exemplary Claim: 26
DRWN 26 Drawing Figure(s); 23 Drawing Page(s)
LN.CNT 3635
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention is directed to amino acid and DNA sequences of a unique glucoamylase P that has a high debranching activity, a Trichoderma host cell, transformed with such sequences, the expression of such recombinant glucoamylase P, and the industrial uses for the recombinant enzyme and hosts transformed therewith.

L2 ANSWER 17 OF 20 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 2
AN 92:30192 AGRICOLA
DN IND92010198
TI **Codon usage** in **Aspergillus** nidulans.

AU Lloyd, A.T.; Sharp, P.M.
CS Trinity College, Dublin, Ireland
AV DNAL (442.8 Z34)
SO M G G : Molecular and general genetics, Nov 1991. Vol. 230, No. 1/2. p. 288-294
Publisher: Berlin, W. Ger. : Springer International.
CODEN: MGGEAE; ISSN: 0026-8925
NTE Includes references.
DT Article
FS Non-U.S. Imprint other than FAO
LA English
AB Synonymous codon usage in genes from the ascomycete (filamentous) fungus Aspergillus nidulans has been investigated. A total of 45 gene sequences has been analysed. Multivariate statistical analysis has been used to identify a single major trend among genes. At one end of this trend are lowly expressed genes, whereas at the other extreme lie genes known or expected to be highly expressed. The major trend is from nearly random codon usage (in the lowly expressed genes) to codon usage that is highly biased towards a set of 19-20 "optimal" codons. The G+C content of the A. nidulans genome is close to 50%, indicating little overall mutational bias, and so the codon usage of lowly expressed genes is as expected in the absence of selection pressure at silent sites. Most of the optimal codons are C- or G-ending, making highly expressed genes more G+C-rich at silent sites.

L2 ANSWER 18 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1983:12226 CAPLUS
DN 98:12226
TI Nucleotide sequence of Aspergillus nidulans mitochondrial genes coding for ATPase subunit 6, cytochrome oxidase subunit 3, seven unidentified proteins, four tRNAs and L-rRNA
AU Netzker, Roland; Koechel, Heinrich G.; Basak, Nazli; Kuentzel, Hans
CS Abt. Chem., Max-Planck-Inst. Exp. Med., Goettingen, D-3400, Fed. Rep. Ger.
SO Nucleic Acids Research (1982), 10(15), 4783-94
CODEN: NARHAD; ISSN: 0305-1048
DT Journal
LA English
AB The complete nucleotide sequence of a 14-kilobase (kb) segment of A. nidulans mitochondrial DNA (mtDNA) reveals a compact organization of genes transcribed from the same mitochondrial strand and coding for 2 functionally known proteins, 7 unidentified polypeptides (URFs), 24 tRNAs, and 2 rRNAs. One of the URFs is located in the intron of the L-rRNA (large ribosomal subunit RNA) gene and codes for a basic protein of 410 residues. The other URFs are in spacer regions and code for hydrophobic proteins. URFa is homologous to human URF4, and URFb produces a polypeptide of 48 residues resembling the human URF6L product (hydrophobic N-terminus, basic C-terminus). The ATPase [9000-83-3] subunit 6 genes from mitochondria and Escherichia coli appear to share a common ancestor. The codon frequencies of identified genes and URFs are similar, and codons ending with guanine or cytosine are rarely used. The structures of tRNAs specific for arginine, asparagine, tyrosine, and histidine are deduced from gene sequences.

L2 ANSWER 19 OF 20 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN
AN AAV00734 DNA DGENE
TI Recombinant fructosyl amino acid oxidase - useful in assays for amadori compounds, e.g. in diabetes diagnosis or food analysis
IN Fukuya H; Kato N; Sakai Y; Tani Y
PA (KYOT-N) KYOTO DAIICHI KAGAKU CO LTD.
PI EP 821064 A2 19980128 33p
AI EP 1997-112403 19970719
PRAI JP 1996-193344 19960723
DT Patent

LA English
OS 1998-088887 [09]
DESC Fructosyl amino acid oxidase nucleic acid primer 2.
AB PCR primer 2 is based on a partial amino acid sequence of Aspergillus terreus fructosyl amino acid oxidase (FAOD-L, see AAW37141), utilising **Aspergillus codon usage**. It was used with primer 1 (see AAV00733) in the RT-PCR amplification of FAOD-L partial cDNA fragments. A 400 bp PCR fragment was used to screen an A. terreus GP1 (FERM BP-5684) cDNA library. DNA excised from positive clones was used to transform E. coli JM109. Plasmid DNA from transformants was sequenced, identifying plasmid pFAL2 that included a 1314 bp coding region (see AAV00732) for A. terreus FAOD-L. The FAOD-L can be used in assays for, e.g. determination of amadori compounds such as glycated blood proteins, diagnosis and monitoring of diabetes or quality control of foods.

L2 ANSWER 20 OF 20 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN
AN AAV00733 DNA DGENE
TI Recombinant fructosyl amino acid oxidase - useful in assays for amadori compounds, e.g. in diabetes diagnosis or food analysis
IN Fukuya H; Kato N; Sakai Y; Tani Y
PA (KYOT-N) KYOTO DAIICHI KAGAKU CO LTD.
PI EP 821064 A2 19980128 33p
AI EP 1997-112403 19970719
PRAI JP 1996-193344 19960723
DT Patent
LA English
OS 1998-088887 [09]
DESC Fructosyl amino acid oxidase nucleic acid primer 1.
AB PCR primer 1 is based on a partial amino acid sequence of Aspergillus terreus fructosyl amino acid oxidase (FAOD-L, see AAW37141), utilising **Aspergillus codon usage**. It was used with primer 2 (see AAV00734) in the RT-PCR amplification of FAOD-L partial cDNA fragments. A 400 bp PCR fragment was used to screen an A. terreus GP1 (FERM BP-5684) cDNA library. DNA excised from positive clones was used to transform E. coli JM109. Plasmid DNA from transformants was sequenced, identifying plasmid pFAL2 that included a 1314 bp coding region (see AAV00732) for A. terreus FAOD-L. The FAOD-L can be used in assays for, e.g. determination of amadori compounds such as glycated blood proteins, diagnosis and monitoring of diabetes or quality control of foods.

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